BUREAU OF EDUCATION, INDIA

PAMPHLET No. 16.

Report

of the

Expert Committee

of the

Central Advisory Board of Education

on

UNIFORM INDIAN BRAILLE

with

INK-PRINT CHARTS

for

INDIAN ALPHABETS.

AMENDED REPRINT:



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FOREWORD

While the Uniform Indian Braille Code, drawn up by the Expert Committee appointed by the Central Advisory Board of Education, in the form in which it was finally approved by the Board, is being published for use by schools for the Blind in India it is fitting that a short history of the efforts made in that direction till it attained this final form be placed on record.

The Braille alphabet was invented by Louis Braille, a blind young man in Paris in the year 1820 and has since then come to be used as the medium for reading and writing for the Blind all over the world. From the time when the first school for the Blind was established in India in the eighties of the last century, each school before it could start had to draw up or adopt a Braille Code for the reading and writing of the language of the area which it served. Thus a number of Braille Codes came into existence in India, principal among which were:

- 1. The Shirreff Braille, used for Urdu, Hindi and Gurmukhi in Northern India.
- 2. The Shah Braille used for Bengali and Bihari in Calcutta and Patna.
- 3. The Oriental Braille of Messrs. Knowles and Garthwaite used by the American Mission School for the Blind, now known as Dadar School for the Blind for Marathi.
- 4. The Indian Braille of Dr. Nilkanthrai used by the Victoria Memorial School for the Blind in Bombay and the Schools for the Blind in Poona and Mahsana.
- 5. The Mysore Braille used for Tamil, Telugu and Kanarese in Mysore.
- 6. The Tamil Braille of Miss Askwith for use in the Schools for the Blind in Palamcottah and Poonsmallee.
- 7. The Sindhi Braille used in the School for the Blind in Karachi.

This created a babel for the Indian Blind in general and against this necessity for a Uniform Braille System for various Indian languages was gress was made with the education of the Blind in this country, the state of affairs, which was bound to create greater difficulties as more pronecessity for a Uniform Braille System for various Indian languages was thus keenly felt. Sporadic attempts by the educationists in the field and the Government were also made but no uniformity of the objective could be arrived at.

- 2. The first movement for unification began with the publication by the British and Foreign Bible Society of the excellent scholarly piece of joint work "The Oriental Braille" by Rev. J. Knowles and Mr. L. Garthwaite in 1902 and it was circulated for opinion but ultimately did not bear the desired result.
- 3. The next effort for producing a Uniform Braille Code for Indian languages was made by Mr. P. M. Advani who attended by invitation the fourth meeting of the Central Advisory Board of Education held in New Delhi on the 5th January, 1922 to advise the Board on the education of the blind, and explained to them his scheme for a Uniform Braille.

System for Indian Vernaculars. The Board at this meeting made the following recommendations to the Government of India:

- (i) That a Committee should immediately be appointed by the Central Government to go into the subject of the possibility of a Uniform Braille for all Indian or all Indo-Aryan languages and frame such a Uniform system.
- (ii) That at least one up-to-date embossing plant should be established somewhere in India to emboss literature for the blind; also a depot and workshop where apparatus for the education of the blind could be produced and made available.

Mr. Advani later read a paper on his Uniform Code at the 2nd Oriental Conference which met in Calcutta and his paper was published in the Calcutta Review of September, 1922.

The Government of India while in full sympathy was unable to accept these recommendations on account of financial stringency prevailing at the time.

4. In January, 1923, on the initiative of the Rev. Canon W. G. Speight, Principal, Palamcottah Schools for the Blind, a Conference of the Workers for the Blind met at Bombay and considered this subject and resolved:

"That this Conference strongly recommends that all the Braille alphabets at present in use in India shall be thoroughly tested in all the Schools for the Blind with a view to obtaining a complete consensus of opinion thereon".

This consensus of opinion was never achieved as the Conference did not meet again, but Mr. H. D. Chhatrapati, Principal of the Victoria Memorial School for the Blind and brother of Dr. Nilkanthrai continued to press for the adoption of the "Indian Braille" used in his School in all the Schools in India and secured the support of the Government of Bombay for the scheme so that the matter came up again when the reconstituted Central Advisory Board of Education met in December, 1935, but was not considered owing to lack of time. At the 1936 and 1938 meetings of the Central Advisory Board of Education, the subject was also raised in varying forms, but on the strength of the general unfavourable attitude of the Provincial Governments to allot funds for purposes other than for the education of normal children the Board decided that no further action could then be taken in the matter.

5. The National Institute for the Blind, London, also raised the question and in 1932 suggested the setting up of a Braille Printing Press in India, and for that purpose referred to the difficulty caused by the variety of Codes in use in the country. They suggested the formation of an Advisory Committee on the lines of Advisory Committee on the Welfare of the Blind in England. As the majority of the Provincial Governments, to whom this subject was referred by the India, was not in Government of favour of the proposal; it dropped. In 1936, they again raised the question and suggested that if some of the teachers of the principal Schools for the Blind in India could meet and confer, it might be possible to reach some measure of agreement in the matter.

6. Eventually, at its sixth meeting held at Madras on the 11th and 12th January, 1941, the Central Advisory Board of Education felt that the question of adopting a "Uniform Braille Code" in Schools for the Blind was a matter which called for expert advice. It accordingly asked the Educational Commissioner with the Government of India to appoint a small Committee of experts to go into the question and prepare a report for the Board at its next meeting.

The Educational Commissioner got in touch with the Provincial Governments and asked them to nominate Representatives from their Provinces on this Committee and eventually the following personnel for the Committee was selected which met at New Delhi on the 17th and 18th November, 1941:—

- 1. John Sargent, Esq., M.A., C.I.E., Educational Commissioner with the Government of India,—Chairman.
- 2. Col. A. M. Dick, Irwin Hospital, New Delhi.
- 3. Lt.-Col. E. O'G. Kirwan, C.I.E., I.M.S., Professor of Ophthalmology, Medical College, Calcutta.
- 4. Mr. S. C. Roy, M.A., B.L., Lecturer, Calcutta University.
- 5. Mrs. Evelyn Roy, Honorary Recording Secretary, Lighthouse for the Blind, Calcutta.
- 6. Mr. A. K. Shah, Principal, Calcutta Blind School.
- 7. Rev. W. G. Speight, Principal and Manager, Schools for the Blind, Palamcottah, South India.
- 8. Mr. R. M. Halder, M. Ed., Principal, Dadar School for the Blind, Bombay.
- 9. Mr. H. D. Chhatrapati, B.A., late Principal, Victoria Memorial School for the Blind, Bombay.
- 10. Miss Georgina Bateman, Superintendent and Chief Teacher, Blind School, S. P. G. Mission, Ranchi, Bihar.
- 11. Rao Saheb W. N. Wadegaonkar, Superintendent, Blind Boys' Institute, Nagpur.
- 12. Mr. P. M. Advani, M.A., B.Sc., Principal, School for the Blind, Karachi.
- 13. Mahamahopadhyaya Pandit Lachhmi Dhar, M.A., M.O.L., Shastri, St. Stephen's College, Delhi.
- Dr. D. M. Sen, M.A., Ph.D. (London), Secretary, Central Advisory Board of Education, was Secretary of the Committee.

Together with the agenda of the Meeting, each member of the Uniform Braille Committee was supplied with a copy of the note written by Mr. H. D. Chhatrapati on the excellence of the Nilkanthrai Code and its adaptibility to all Indian languages, a note by Mr. R. M. Halder on the present position with regard to Codes and the tactual psychology of blind students and one by Mr. S. C. Roy suggesting that the Committee should not allow itself to be led by the protagonist of any particular Code, but must plan things purely from the point of view of the good of the blind, to which fraternity he himself belonged.

Mr. P. M. Advant distributed among the members a new edition of his paper on "A Uniform Braille Code" and there was on the table for reference by members a paper on "Hindustani Uniform Braille" by Mr. K. Bhattacharjee, B.A. (Gallaudet, U.S.A.), Principal, Lady Noyce School for the Deaf and Dumb, New Delhi.

Three main principles had been followed in drawing up the Codes which existed at the time and the new one recommended by Mr. Bhattacharjee, namely,

- (a) Arrangement of the Braille alphabet along the lines of the Standard English Braille and assignation to them, wherever possible, of Indian sounds corresponding to those they represented in English.
- (b) Re-arrangement of the seven lines of Braille so as to give them a horizontal symmetry in addition to the vertical symmetry they already possessed and arranging Indian sounds in their phonetic order against this rearranged scheme, so that related phonetic sounds were obtained from the fundamental one by a Uniform Scheme in each case.
- (c) Re-arrangement of the Braille signs in pairs on the principle of mirror images and assignation of sounds to them on the phonetic principles of Indian alphabets, so as to achieve the same result as in (b).

The protagonists of the three Schemes were represented on the Committee and after a threadbare discussion of all points, arrived at the following main conclusions and recommendations:

- I. That in order to promote the development of the education of the blind in a systematic and co-ordinated manner, it is essential to adopt a Uniform Braille Code for Indian languages as a whole, each Braille sign representing as far as possible the same sound in all Indian languages.
- II. That the Uniform Code proposed should be based on the following fundamental principles:—
 - (i) As far as practicable the blind should not be segregated from the sighted in the process of their education.
 - (ii) The original arrangement of the Braille signs in seven lines as in the Standard English Braille should be maintained in the Code to be framed for Indian languages.
 - (iii) In the arrangement of alphabets in the Code, the Phonetic order of grouping in the Indian languages should, as far as practicable, be retained.
 - (iv) Phonetic relations between the letters of the alphabets should be represented, as far as possible, within the decision already reached, by some simple relations between the signs assigned to them.
 - (v) Two-cell arrangements should, as far as possible, be avoided and sounds from the different languages, be accommodated by assigning the same signs to different but related sounds

- III. That none of the current Codes can reasonably be accepted as satisfying the needs of a common Code for all languages of India.
- IV. That the question of incorporating contractions and abbreviations can only be taken up after the all-India Code has been formulated.
- V. That the Central Advisory Board of Education should set up a small expert Committee including linguists, who shall—
 - (i) work out a Uniform Braille Code in accordance with the principles recommended in this report;
 - (ii) serve as a Central Board of Reference to whom any specific issues that may arise during the transitional period may be submitted;
 - (iii) form the members of an Advisory Body to the Central Advisory Board of Education on the Education of the Blind.
- VI. That to ensure adequate production of suitable literature for the Blind, a Central Press with an up-to-date embossing plant and a workshop for manufacturing necessary educational apparatus should be established and a Central Library to serve all the institutions in India should also be founded.
- VII. That in order to enable the Schools for the Blind to adopt the new Code and replace their existing stock of literature printed on old lines, the Central and the Provincial Governments should provide such financial assistances as the circumstances may demand.
- VIII. That for the execution of any planned programme of education in the interest of the Blind, accurate statistics are essential and the enumeration of the Blind population should be taken up by the Government of India as early as possible, and at any rate not later than the next census.
- IX. That the Central and Provincial Governments should be urged to promote legislation for the special benefit of blind persons.
- X. That the Central Advisory Boards of Education and Health should jointly consider the problem of the prevention of blindness in this country at an early date.
- 7. The Board in its seventh meeting held in Hyderabad-Deccan, in January, 1942, approved the above recommendations of the Braille Code Committee of 1941 and in pursuance of the recommendation No. V, set up a small committee with Braille experts, who had already done some work in this connection and linguists for the purpose of drawing up the proposed Uniform Braille Code. The personnel of the expert committee thus set up was:—
 - 1. Dr. Sir John Sargent, M.A., C.I.E., Educational Adviser with the Government of India—Chairman.
 - Dr. Abdul Haq, B. Litt., Ph.D. (Oxon), (Formerly Head of the Department of Arabic, Osmania University), Secretary, All India Anjuman-e-Taraqqi-e-Urdu, Delhi—Linguist.
 - 3. Dr. Suniti Kumar Chatterji, M.A., D. Litt. (London), Head of the Department of Comparative Philology, Calcutta University—Linguist.

- 4. Mr. P. M. Advani, M.A., B.Sc., Principal, School for the Blind, Karachi—Braillist.
- 5. Mr. Kalidas Bhattacharjee, B.A. (Gallaudet, U.S.A.), Principal, Lady Noyce School for the Deaf and Dumb, New Delhi— Braillist.
- 8. The Expert Committee met at Delhi from the 18th to the 22nd December 1942. They had before them the principles on which they were to draw up the Code and an excellent chart of Indian Alphabets drawn up by Mr. K. Bhattacharjee for his "Hindustani Uniform Braille" to guide them in their work. They had also before them a mass of criticism and suggestions on the principles on which the Uniform Code was to be based and decided faithfully to carry out the instructions of the Uniform Braille Committee of the previous year and drew up their report together with a draft of the Uniform Braille Code for Indian languages, which was presented to the Central Advisory Board of Education at its 8th meeting at Lucknow in January, 1943.

The Board gave their careful consideration to the Uniform Braille Code and expressed their genuine appreciation of the work done by the Expert Committee. They thought the issue of utmost importance to the country and recommended that the report of the Expert Committee be circulated to the Provincial Governments, Local Administrations and States concerned for their opinion in the first instance. The Board also directed that the draft Code be forwarded to the National Institute for the Blind, London, for their opinion.

9. The Code, after receiving this approval by the Central Advisory Board of Education, was printed for 12 Indian Languages and for Arabic, and was circulated as above. Criticisms and appreciations of the Code were received from Provincial Governments and the National Institute for the Blind, and these were carefully examined by the Expert Committee who incorporated in the Code some of the suggestions made, compatible with the recommendations and principles laid down by the Braille Code Committee of 1941. The Expert Committee further recommended that at present the existing Report on the Uniform Code with the Braille Charts indicating the suggested incorporations be introduced and at a later stage when such time would come after due practical experiments in schools, the Report and the Charts duly modified may be provided.

The Code as thus amended was submitted to the Central Advisory Board of Education together with the criticisms received.

10. The Central Advisory Board of Education, in their eleventh meeting held at Karachi in January, 1945, considered the views of the Provincial Governments, as well as the views furnished by the National Institute for the Blind, on the Report of the Expert Committee on a Uniform Braille Code for India, together with the above recommendations of the Expert Committee, on the suggestions submitted by the various authorities. The Board accepted the recommendations of the Expert Committee and decided that steps should be taken to bring the Uniform Braille Code as finally approved into use in all schools for the Blind in India. The Board, however, have directed that any difficulties experienced in the actual use of the Code should be brought to the notice of the Expert Committee for their further consideration.

11. After the above resolution had been passed by the Central Advisory Board of Education, Lieut.-Colonel Sir Clutha Mackenzie, Officer on Special Duty (Blindness) set up a Committee of eight persons, including himself, and drew up a Uniform Braille Code named "The Standard Indian Braille", basing it on the principle of assigning the same signs to common sounds between English and Indian languages, and, for this purpose, upsetting the 7-line arrangement of the Standard English Braille which the Uniform Braille Committee of 1941 had laid down as the basis for a Uniform Code.

The Expert Braille Committee met on the 1st and 2nd April, 1946, at New Delhi, and, after carefully considering the papers sent to them by Sir Clutha Mackenzie and after listening to all that he and his colleagues had to say on the subject, came to the conclusion that as the scheme proposed by Sir Clutha had been fully discussed in the 1941 Uniform Braille Committee and rejected, and as the members of the Expert Committee were in agreement with the conclusions of the Uniform Braille Committee on this subject, they did not see any reason for changing the Uniform Code they had drawn up.

12. The Central Advisory Board of Education at their 13th meeting at Bombay on the 9th, 10th and 11th January 1947 considered the Report of their Expert Committee on the Uniform Braille Code for India. Mr. Advani, a member of that Committee who was present by special invitation dealt with various questions raised by members. The Board gave careful consideration to the views of those who advocated the adoption of the 'Standard Indian Braille' in place of the Uniform Braille Code, specially designed for use in India, which had been accepted by the Board in 1945. The Board examined in detail the points put forward for and against the two Codes and unanimously reiterated their original recommendation that steps should be taken to bring the Uniform Braille Code into use in all the schools for the Blind in India as early as practicable.

सन्त्रयेव अवने

JOHN SARGENT,

Educational Adviser, Government of India

July 4, 1947

FREFACE

The Central Advisory Board of Education at their eighth meeting held in January, 1943 gave their careful consideration to the Uniform Braille Code for India prepared by the Expert Committee appointed at their previous meeting and expressed their genuine appreciation of the work done by the Committee. They thought the issue of the utmost importance to the country and recommended that the report of the Expert Committee be circulated to the Provincial Governments, Local Administrations and States concerned for their opinion in the first instance. The Board also directed that the draft Code be forwarded to the National Institute for the Blind in Great Britain for their opinion.

- 2. At their eleventh meeting in January, 1945, the Board considered the views of the Provincial Governments, etc., as well as the views furnished by the National Institute for the Blind, London, on the report, together with the recommendations of Expert Committee, on the suggestions submitted by the various authorities. The Board accepted the recommendations of the Expert Committee and decided that steps should be taken to bring the Uniform Braille Code as finally approved, into use in all the schools for the blind in India. The Board, however, directed that any difficulties experienced in the actual use of the Code should be brought to the notice of the Expert Committee for their further consideration.
- 3. The Code as finally approved by the Board is appended to this Report.

REPORT OF

THE EXPERT COMMITTEE ON THE UNIFORM BRAILLE CODE, 1943

After our preliminary meeting on the 18th December 1942, we have been able to draw up a chart of Uniform Indian Braille, and herewith submit the same with a few explanatory notes.

- 2. We have indicated the manner in which the Code is to be used for the alphabets of the three different groups of Indian languages with the help of one alphabet in each group, but we hope that the Central Advisory Board of Education will publish the Code with all Indian alphabets printed, so that the Code will be available for the use of every school in India without any doubt or difficulty. When that stage is arrived, we shall do our best to help in the correct publication of the Code.*
- 3. We have based our Code on the recommendations of the Uniform Braille Committee, and have sought to carry them out as far as it is possible. We were directed to retain the original seven line arrangement of Braille and in doing that we regret that we have not been able to take advantage of the horizontal symmetry which would have suited Indian languages better. We have, therefore, made only a very limited use of Principle II (iv)* In the case of the Ferso-Arabic alphabets where letters having the same sound are given similar front and back signs, so that if a beginner should find it difficult to distinguish the front signs of line 7 he should yet produce the correct sounds.
- 4. In ordinary writing the short vowel a is supposed to be inherent in the consonants of the Indo-Aryan and Dravidian languages when fully written. They will always be fully written in Braille, and we suggest that the short vowel a should be written each time it occurs rather than that the sign of virama should be written when a consonant is unmoved by a vowel. We have, therefore, provided no sign for virama or jazm. This arrangement will make the Code more scientific and more uniform. It will also lead to greater accuracy in reading and writing.
- 5. The Dravidian languages require two extra vowels, the short e and o which are not used in the Indo-Aryan and the Perso-Arabic alphabets. These have been provided in line 5 and assigned signs similar to those used for the corresponding long vowels. As a teacher in each language will choose the order in which he teaches the alphabet on modern principles of education, the separation of these two vowels from the main scheme will present no difficulty.
- 6. We recommend that for the Perso-Arabic alphabets the 10 vowels required should have the same signs as are provided for the Indo-Aryan alphabets as has been the practice up to now. This arrangement is necessitated by reasons of uniformity and has besides other advantages as well.

^{*}In the attached charts the manner in which the Code is to be used for the 13 alphabets of the three different groups of Indian k nguages has been indicated. An abridged chart with one alphabet for each of the three groups of languages has also been provided similar to the seven line arrangement in the Standard English Braille to note the adaptations in one and the same chart.

If spelt out as the vowels are done for the sighted in these languages, they will require two or even three signs for each vowel, and economy of writing space is a matter of paramount importance in Braille.

We have provided separate signs for all the consonants required by these alphabets in spite of the fact that some of them have the same sounds as others already provided, because these will be useful for the study of Arabic and the reading and writing of the Quran.

- 7. No separate signs have been provided for tashdid and tanwin. For the former it is suggested that the consonant concerned should be written twice as in other languages and for the latter the short vowel involved should be written twice as in the case of the sighted.
- 8. For classical studies in the Perso-Arabic group of languages we suggest that the sign for the long vowel a should be used for alif and the same written twice for alifmadd, using the short vowels a, i and u for zabar, zer and pesh respectively.
- 9. For purposes of teaching we recommend that the letters of the alphabet be named as they are in the language as taught to the sighted.
- 10. Indian Uniform Braille shall be written from right to left and read from left to right.
- 11. We hope this Code will meet the approval of those who have the welfare of the blind at heart, and will solve the problem of the Uniform Code for India.

JOHN SARGENT (Chairman).

ABDUL HAQ.

P. M. ADVANI.

K. BHATTACHARJEE.

S. K. CHATTERJI.

UNIFORM INDIAN BRAILLE

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The Devant; or other letters have been used to represent the Indo-Aryan group of language Where additional letters are required they are taken from Bengali and are marked B.

Kanarese letters have been used for Dravidian group of languages. Additional letters have been marked Ta for Tamil and Te for Telugu.

Urdu is used as the base for the Perso-Arabic alphabets. Sindhi, Pushto or Arabic etters are marked S. 'P' and A. respectively,

UNIFORM INDIAN BRAILLE CHART-LINE

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EXFLANATORY NOTE

The history of past attempts for the adoption of a Uniform Braille Code in the schools for the blind in India will be found in the Proceedings of the Sixth Meeting of the Central Advisory Board of Education in India held at Madras on the 11th and 12th January 1941 on pages 54-55—Appendix I (h) read with the Report of the Uniform Braille Code Committee, both of which are published.

- 2. The report of the Expert Committee appointed to work out a Uniform Braille Code is on page 11 and the decisions of the Board thereon are given in the Preface to this report. The Uniform Indian Braille is on page 13 and the Uniform Code with 12 Indian alphabets and the Arabic alphabet to show how it can be used in schools for the blind all over the country is to be found on pages 14 to 19 of this report. Arabic though not an Indian language is included because it was felt by the Committee that the value of a Uniform Indian Code would be enhanced if the Muslim blind in India could use the Code for writing and reading the Quran. The Code for Arabic may, if so desired, be used in the more orthodox style. For Urdu, the vowels in Line I are written in the form adopted by the Anjuman-e-Taraqqi-e-Urdu and used by the Osmania University of Hyderabad-Deccan. The orthodox form of these vowels is the same as that used for Pushto and Sindhi.
- 3. The charts published herewith prove conclusively the need there was for a Uniform Indian Braille Code to take the place of the many Codes which exist today because in the case of the first forty signs of the Braille alphabet all Indian languages are almost identical. The common features of the Indian alphabets do not end with the first forty signs but extend further into a considerable portion of the remaining 23 Braille signs. Tamil has a very short alphabet and does not use many of these signs but it fits in with the scheme. Pushto does not use the aspirated consonants but it too fits in admirably. So far almost every school had a Code of its own and in some cases schools teaching the same language used different Codes so that children of one school could not read from the books used in the other or correspond with friends who had been trained in the other school.
- 4. The charts also justify the decision of the Uniform Braille Committee of 1941, which laid down the fundamental principles on which the Uniform Code was to be based, that the phonetic order of grouping used in the majority of Indian alphabets, should be retained. This phonetic order brings out very clearly the great similarity between the alphabets of the three groups of Indian literary languages. The alphabets classed here as Indo-Aryan cover all the North-Indian languages which belong to the Indic class of the Indo-Germanic family of languages. The Dravidian languages belong to a different family, but their alphabets on account of the large admixture of Aryans with the Dravidians of South India have in course of time come very close together, Tamil alone retaining its short alphabet. The Ferso-Arabic alphabets cover four principal languages, Pushto, Urdu, Punjabi and Sindhi. Of these the first belongs to the Iranie class of the Indo-Germanic family of languages while the other three are Indo-Aryan in origin. Their alphabets, therefore, show great similarity

in their phonetic values to the Indo-Aryan languages but owing to the use of a large number of words of Arabic origin in these languages they also require a number of letters from the Arabic alphabet, many of which have changed their phonetic values by such adoption. These alphabets have, therefore, a larger number of letters in them.

The adoption of the original seven line arrangement of Braille has enabled the Committee to retain in the Uniform Code all international items that the numerals, the punctuations and the language and mathematical signs for the Uniform Indian Braille are the same as for the Standard English Braille.

- 5. The Code was actually drawn up by the Braillist members of the Committee, under the guidance of their linguist colleagues. They have faithfully carried out the instructions given to them in the fundamental principles laid down by the Uniform Braille Committee, even though it meant a considerable modification of what they considered to be more a scientific scheme for a Uniform Code. An effort has been made to make the Code include all that would be needed in the different languages of India, but it is possible that at this preliminary stage some omissions and discrepancies may have occurred, and if any such are detected and brought to their notice, the Expert Committee would try their best to provide for them.
- 6. Indian languages have a total of 89 different sounds which have to be represented, and therefore it was necessary to use a number of Braille signs to represent more than one sound each, generally in different groups of languages. The Perso-Arabic Group of languages presented special difficulty in that this group alone had 68 sounds to be represented, but Sindhi and Pushto had each four sounds peculiar to itself and these have been represented by four signs of Braille, two sounds one in Sindhi and one in Fushto to a Braille Sign and by dealing with other peculiarities also in the same way it has been possible to work out Uniform Code with only 62 Braille signs, leaving the last one for future use in making up two-cell signs and contractions.
- 7. The Uniform Code here presented is the result of the largest possible agreement among those concerned with the education of the blind who formed the Uniform Braille Committee of 1941. and of a considerable amount of labour and thoughtfulness on the part of the Expert Committee, appointed by the Central Advisory Board of Education. It will, I hope, be a great step forward in the education of the blind in India and will bring the establishment of a Braille Press in India into early realization.

JOHN SARGENT,

Educational Adviser to the Government of India.

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